

THE TECH

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THE TECH

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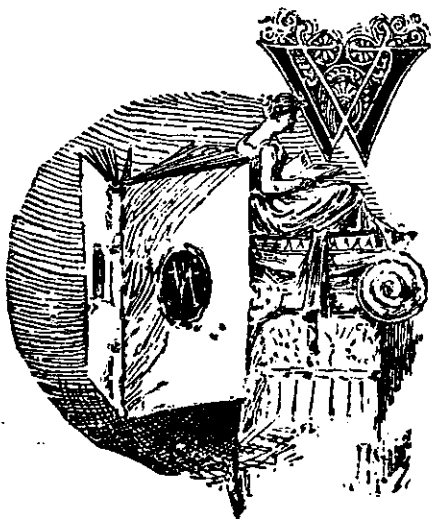
For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.

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WITH the passing of another class from the Institute, is ushered in a momentous change in the life of our school: faces that have been familiar in the hall, in the laboratory, on the field, are seen no

more. Freshmen are Sophomores about to enter upon a new freedom and dignity. Sophomores are Juniors, with a wider, broader field of enterprise before them; and, lastly, Juniors are Seniors, nerved with the endeavor of hard and earnest effort in the

preparation of a life work. But to those who are at the threshold of their careers is the change of greatest import. Now is it make or spoil, and upon the outcome depends more than anything they have heretofore accomplished. If the start be good, if it be only in the right spirit, no matter what the station, the rest is easy. But if a man begins in a careless, slovenly way of life, with lack of earnestness of purpose and method, his reputation will be made against him, and he will find it difficult to create a more favorable impression. Then, from the first, let every man come to a sense of the true importance of the work before him, and the result cannot be uncertain.

Tech. men are generally recognized as being well equipped for work; better equipped in those branches which they pursue, than graduates of other institutions. This is in their favor. But business positions call for work itself, not for the equipment, so that a man must have the power of application in addition to store of theory; otherwise he is valueless. Fortunately, Tech. men usually have this power also, and, we believe, it is this successful combination of the two that wins esteem in the business world. Goethe has said, in translation, "To everyone comes that which he deserves." See to it only that he deserves that which comes.

THE TECH extends a most cordial wish to the members of the Class of '98 for a most prosperous and happy business career.

Fifty dollars of the one hundred and thirty-three given by the Class of '97, to complete the Student Walker Memorial Fund, has been repaid, having been contributed to the fund by the Hammer and Tongs Society.

Alumni Reception.



THE opening exercise of Commencement Week took place Friday night, June 3, at the Exchange Club, when the Alumni Association of the M. I. T., in a reception to the Graduating Class, welcomed '98 to the ranks of Technology's Alumni. Although the prevailing spirit of the evening was one of joy over the successful completion of the four years of Institute work, there was an undercurrent of regret that it was over, that showed how close the men had come to one another in that time, and the strength of the ties that bound them to their Alma Mater. When supper was over, Mr. J. R. Freeman, '76, President of the Alumni Association, introduced with brief, but appropriate remarks, the speakers of the evening.

Mr. Charles-Edward Amory Winslow, President of '98, gave a résumé of the progress of the undergraduate interests at Technology during the past year. He spoke of the formation of the Advisory Council on Athletics, of our success in all branches of athletics, of the musical clubs, THE TECH and "Technique," and the work of the various social and professional societies. He closed with an appeal to all to support the undergraduates of the Institute.

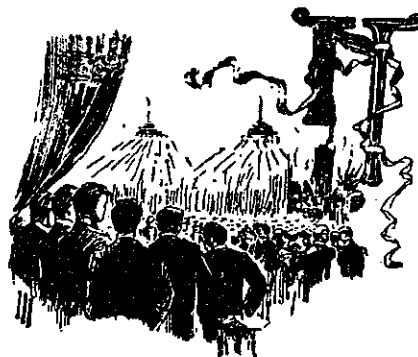
Mr. Wigglesworth, treasurer of the Institute, spoke of the "red letter year in the financial history of the Institute." He said that a year ago \$750,000 represented the resources of Technology. Since then \$900,000 has been received from bequests, and news of \$25,000 more had come that very evening from the trustees of the Randall Estate. On the other hand, the new building will require an expenditure of \$200,000, running expenses will increase, and the annual State grant of \$25,000 expires in three years. In conclusion he outlined a plan which, if the Franklin fund of \$340,000 now in litigation can be secured, will result in the erection of

a building devoted exclusively to Physics. Dr. Dewey tendered the congratulations of the Faculty to those about to receive degrees. He spoke of the new principle of education which Technology represents, and the obligation we all are under to the Institute and to the world to see that this principle is carried out unchanged.

Dr. Williams, '73, gave some interesting reminiscences of his class, and of the Institute of twenty-five years ago, with its single building (Rogers) and its 348 students. He also sketched the origin and aims of the Alumni Association.

The Glee Club was present, and gave some selections that were fully appreciated by all present.

Senior Concert.



EVER before has Huntington Hall held a more brilliant audience than that which assembled on the evening of Saturday, June 4, to enjoy the concert tendered to the graduating class by the Institute Glee, Banjo, and Mandolin Clubs. In spite of forbidding weather, the audience filled all the regular seats, and rows of chairs down every aisle besides.

The hall was decorated with palms and ferns, and the programmes were neat four-page affairs, bound with a cord of the class colors and bearing a decorative cover. The clubs were very short handed, as a number of men had left for the summer; but, in spite of this handicap, all did very good work.

The "Chicapoo War Dance," by the Banjo Club, received the most applause, and the "Daughter of Love" and "Stars and Stripes Forever," by the Mandolin Club, were well received; but the Glee Club was the favorite of the evening, with its "Topical Song," "Old Woman," and "Kentucky Babe."

The full programme was as follows:—

"Eton Boating Song"	Glee and Mandolin Clubs.
"Yellow Kid Patrol"	Banjo Club.
"Daughter of Love"	Mandolin Club.
Duet, Banjeaurine and Guitar,	Messrs. Perry and Addicks.
Negro Medley	Glee Club.
"The Scorchers"	Banjo Club.
"Please Won't You Be My—H'm?"	Glee Club.
"Stars and Stripes Forever"	Mandolin Club.
"Chicapoo War Dance"	Banjo Club.
Violin Solo, "Nocturne"	Mr. Wm. Fred'k Steffens.
"Kentucky Babe"	Glee Club.
Schneider's Band	Glee and Banjo Clubs.

Baccalaureate Sermon.

PREACHED in Trinity Church, in the city of Boston, before the Senior Class of the Massachusetts Institute of Technology, on the afternoon of Sunday, June 5, 1898, by E. Winchester Donald, D.D., LL.D.

St. Matthew vi. 33: "But seek ye first the kingdom of God and his righteousness."

Let me begin by laying a weighty emphasis upon the favoring circumstance that this service is not of ecclesiastical or academic appointment. The claim is frequently urged that those institutions of learning which were founded far back in the Commonwealth's history, when the Church was more of a power and less of an influence than it is now, retain, by sheer force of venerable habit, the ancient custom of a baccalaureate sermon, and would gladly forego it but for the silent pleading of the past. But the baselessness of that claim is convincingly shown by your voluntary presence here this afternoon. No statute of the Massachusetts Institute of Technology, and no regulation of its Faculty, determined that an hour of the last Sunday of your student life, in the now familiar city, should be spent beneath the roof of a Christian Church. You are here of your own choice. Nor did the Church extend to you an invitation which you thought it would be discourteous to decline. You are here of your own choice. You recognized, in different ways and in different degrees, that on the eve of your parting from the great School which has trained you, and from one another, no act could have a more critical significance than that of standing together in the presence of God, acknowledging your common allegiance to him and his everlasting laws. In the spirit of your coming the preacher receives you, and gladly accepts the duty you have asked him to discharge.

I am to speak to you of religion, the religion of Jesus Christ; for the religion of America to-day is Christianity, and there are no signs visible anywhere that any other religion is to supplant it. It is here to stay long after you and I are forgotten, even if its force shall be now weak, now strong. It lies beneath all our visible activities, and colors when it does not control. So that it must always be reckoned with in any estimate made of life, in every least attempt we make to interpret or guide it. Any blundering there may be in religion is limited to our reckoning with it, regarded as a tremendous force outside us, or treated as a personal force within us. Consequently, an overwhelmingly large majority of our young men is concerned, earnestly or languidly, with religion in its simplicity, and care very little about the special, temporary, and human forms or methods through which it becomes visible to the eye.

Now, religion busies itself with this world, and with the world which is hidden from our knowledge but which humanity has ever believed to exist: that is to say, it busies itself with conduct in this life, and with hope of the life which is to be revealed hereafter. I shall say nothing of religion as concerned with immortality and heaven, as furnishing material upon which the hope and the consequent comfort of these may serenely rest. For you are young, your interests to-day are passionately and firmly engaged in prophesying what the half century of strenuous, enterprising, achieving work which lies before you is to bring you in rewards of many kinds. These interests we cannot, if we would, disengage from their present setting, and force into the frame of a half-guessed world to come. You are engineers, architects, chemists, biologists, metallurgists, electricians, and the field upon which these several crafts are to be plied, the material with which they have to do, are wholly of this earth. The shining architecture of the heavenly Jerusalem does not appeal to you to-day; the nature of the material and of the forces which we shall find in the celestial world tempts you to no curious speculations. You have been trained and disciplined to deal intelligently with the forces and substances of nature, and with these you propose resolutely to concern yourselves. The future is practically limited, in your conscious calculations, to fifty years. It is of this half century of life and work of which I wish to speak as it is to be related to religion. What does it mean, then, to lay it upon the engineer and architect, the chemist and the electrician, to seek first the kingdom of God and his great righteousness? It means for them pre-

cisely what it means when we lay it upon the statesman and the preacher, the bishop and the priest. It means that back of the whole outward framework of personal activity, in any conceivable and legitimate field of human enterprise, must live loyalty to God, the loyalty which perpetually utters itself in the character of the man who does the work. For apart from the man's achievements stands the man himself. And what he is, what he thinks of himself, what he has the right to think of himself, is inexorably, transcendently, important. A bad man in the presence of his splendid achievements is like the sick man at his prodigally loaded table. That a man must be good in order to justify fifty years of toil is as true a proposition as any you can find in your geometry.

Personal badness vitiates one's total career as inevitably as a single error in the initial equation destroys the value of the final result. When Jesus said, "Seek ye first the kingdom of God and his righteousness," he intended to declare that the primary, elemental, fundamental quality of a human life is its obedience to the will of God as that will declares itself in righteousness. And it is the true glory of humanity that the whole history of our race testifies, out of its evil and good alike, that Jesus is magnificently right. You and I, whatever may be our particular doctrinal beliefs, are entirely agreed that life without the love of goodness and the effort to attain it is no true life at all. He who believes in lies and theft, in hatefulness and selfishness, as capable under any circumstance of enriching life, of bringing it on to its goal, is not merely wicked, he is insane. No grossest materialist believes that, no sad or querulous agnostic believes it. Such a belief turns the world upside down, and if ever men should accept it and practice it, society would lie in pieces in a day. No, we are at least sane, spite of the flagrant and frequent lapses from the clear standard of living which our conduct shows. We believe in truth and honesty, in justice and compassion. We hold, with the stoutest, that these must be our own, or fail we must. And these make the kingdom of God visible and real in this world. These we are to seek first, and all the rest—whatever the rest may be—shall be safely added.

But all these, Jesus says, have their root and life in God. If they are severed from Him in our thinking, and believing, they are apt to die, generally they do die. For when we stop carefully to think about it, why should any of us be true under circumstances which make holding the truth painful or costly? Why is it wrong to lie or steal? Why is it right to be

truthful and honest? These, the very simplest questions one can ask, are yet the hardest to answer, if we leave out God. No man can prove to me that untruth is wrong by simply pointing to the disastrous consequences of untruth to reputation and to one's place among his fellows, or even by appealing to the reality and dreadfulness of the liar's self-contempt. For if all men should agree that untruthfulness should be esteemed a cleverness to be rewarded and not punished, then social penalty ceases, and to lie is no longer wrong. And if social penalty ceases, self-contempt will speedily come to be regarded as an intellectual blunder and so pass out of the consciousness.

No—truth in man is the utterance in him of the truth of God. It is wrong to lie because a lie is the denial of the everlasting nature of God. Upon truth He has built up his universe. Upon truth rests the whole fair fabric of nature, and you confidently count upon its steadfast truthfulness at every step of your study of it. Upon truth is solidly and forever based the very possibility of social life as being the expression of the life of God himself. The reason why truth, and justice, and compassion persist from generation to generation, is not at all because law and penalty have stood guard over them through all the ages, it is because the conviction of their imperative, absolute necessity has been constantly recruited and reinvigorated by a profound belief that they have their origin in a God of truth, compassion, and justice. Without that great conviction in the heart of man, the judge sitting on his bench is no more than a dumb, impotent, graven image; and the indignation of men against the wrongdoer no more than a querulous complaint that someone's ease has been invaded. Religion creates and maintains the mighty moral forces which hold society together, which make law something more than a formulated wish, and penalty more dignified than paying off a grudge.

If this be true, then, instantly each of us becomes interested in religion. Not to be interested in it means that we are indifferent to the ethical forces which secure the order and well-being of society. But to these forces none of us are indifferent. On the contrary, we are passionately and profoundly interested in them. We ardently wish them to increase in intensity, to tighten their grip upon social and individual conduct, lifting it up into a high region of reverence, steadiness, resoluteness. For there can be no smallest doubt that society to-day is far more anxious, even fearful, about the issue of certain conspicuous tendencies in our ethical life to-day than about public policies and legis-

lative acts. When men denounce the machine in politics and the syndicate in trade, or when they declaim against industrial systems and social arrangements, they really are arraigning the morals of persons. The worst method of obtaining an expression of public opinion conducted by upright men is infinitely preferable to the best method operated by men without honor or patriotism. They who despair of our politics are they who have seen the wisest and purest plans for administering them brought to naught by unscrupulous leaders, and a willingly deluded, because richly rewarded, following. It is the scarcity of political integrity, not the lack of political sagacity, which is making political pessimists throughout the land. We suspect the moral uprightness, not the economic wisdom, of too many of our public men. That is the secret panic which besets the most thoughtful men to-day. The fullest fed people on the face of the whole earth, rich, young, powerful are we, and yet the nation is uneasy. But it is her conscience that is uneasy. She is secretly asking whether her hold upon righteousness is commensurate with her vast possessions and her accumulated wealth, whether she is going to be morally strong enough to guard her physical goods, whether her enormous energy will spare enough of itself to create more honor, more justice, more unbending integrity, and to incorporate them into the national life. These be the questions which men hear in the stillness of their own hearts, and now and then above the noise of the market place and mill. We are beginning to be alarmed, and are wondering what may happen when prosperity, which hushes so many fears, shall slacken, as slacken it must when all the markets of the world have been reached and filled. What boots the skill of the electrician,—marvelous master of nature's unseen, but tremendous, forces,—if there be nothing to arrest the long, lean, finger reaching for the button that explodes the mine beneath the unsuspecting ship, or stay the arm that poises in mid air the awful bomb? What boots the architect's severe training in the carrying weight of his beams and piers, or his power to create beauty, if true mortar go not with the sand? No; without religion's contribution to the forces which create and maintain social and political safety, there is no safety that is safe. Depend upon it, to forget God, or to ignore God, is to seal up the fountain of a people's greatness and permanence. The nations that forget God commit suicide.

But just now, when religion seems to have a weakened hold upon men's, and especially educated young men's, allegiance, it may be urged that there

is much vigorous morality still resident in our social life. Indeed there is. We cannot miss it. It meets us every day. But it is largely an inheritance from a past when religion more visibly and more widely influenced life than it does to-day. Religion created it, and not yet is it exhausted. The religious habit of the sire is living in the ethical habit of the son. But unless it be freshly recruited by religion now it must be exhausted in the near future. That is the consideration which young men who love their land should ponder. Ah, in this quiet hour of your last Sunday together as a class, let me summon to your memory the homes from which you came. Think of the devout and reverent atmosphere in which your childhood was passed. Apart from the restraints and enforced habits which may have fretted you, and from which your life here was an emancipation, there was the high sense of duty, the noble capacity for sacrifice, the abiding ideal of honor and integrity, which were nourished by prayer and communion with God. By the silent, sacred, powerful influence of these you were surrounded, and these entered into your blood. The more scrupulous conscience, the firmer will, the loftier honor are yours as an inheritance from your parents. And if you have been held back from the sins that scorch and scar, if you have resisted the fierce temptations which have met you here on the right hand and on the left, are you not glad to acknowledge the power in you of a resistance that came from the sturdy father and the sweet, patient, burden-bearing, silent mother who lived near to God? The debt you owe them is incalculable. It will forever be a debt undischarged to them. But you are under bonds to transmit unimpaired, nay, increased and enriched, this inestimable gift to the generation which is yet for to come. You have no right to consume it upon yourself, content if there be enough of it to keep you morally comfortable through your own career, leaving nothing to those who follow. It is a contemptible selfishness which cares only for contemporary well-being. All the lives which in great or humble station have been the benefactors of society have greatly cared for a future that was larger and longer than their own. They believed that righteousness, and justice, and compassion pass down, not through laws and institutions, but through persons; that the sacred succession of goodness is inexorably conditioned by the succession of good men, and that whenever they fell upon their knees their prayers were not alone for themselves, but for those who should find righteous-

ness easier and sinning harder because of what they had striven to be.

And so religion makes an appeal to the chivalrous instinct that is in us all. It comes to us first of all with a command, "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind." It bids us worship and revere because reverence and worship are the channels through which flow into character the uncompromising, dauntless, preservative qualities of ethical clairvoyance, of ethical vigor. Not by the arbitrary enactments of men, but by the everlasting will of God, the moral future of many people is put into your custody. God holds you responsible for a good deal of the ethical quality of scores of men, and so he bids you seek his kingdom and the righteousness of it first, not second, or third, much less last. He gives you no choice, you need no choice; for only as your careers are laid in righteousness, and only as righteousness is recruited in religion, is there so much as a chance that you will bless the world.

This morning I listened to a sermon addressed to a company of young men who were to be ordained ministers of the Christian Church. The words which were fitly spoken to them are equally applicable to you, for they were told that only as they exercised their ecclesiastical functions in the sphere of personal consecration to the righteousness of God's kingdom, would the truth they were to utter and the sacraments they should administer be channels through which blessing reaches men. Only as you shall be architects and chemists, electricians and engineers, who plan and analyze, discover and apply, in the spirit of that righteousness which knows neither compromise nor evasion will the work you do be worth the doing in comparison of the moral mischief you may cause in the doing of it. And so all of us, and equally, are to be religious, are to become servants of God, doing his will in righteousness, whatever be the special occupation to which we are called and fit ourselves to fill. The distinction between the sacred and the secular is for the most part purely artificial. "Make me a priest that I may put bread in my mouth! make me an engineer that I may bind together in one the peoples who yearn for each other across the unbridged sea! Make me priest or make me engineer that I may help ever so little to bring in that righteousness without which a church is an exasperating mockery, and a bridge the taunt that physical oneness may be spiritual disunion." To seek first the kingdom of God is, therefore, the act, not of devotees, and mystics, and

fanatics, but of virile open-eyed men, who are to live and work, and love, and suffer, and enjoy, out on the broad sunny fields of social interests and human enterprise, open to sky and stars, and to every wind that blows. For the service of God is the service of man. And that explains why you as listeners and I as preacher have met together this afternoon. You and I are the servants of God, and equally, by just so much as back of our variant professions there lives the deep, irremovable conviction that we are here to do his will.

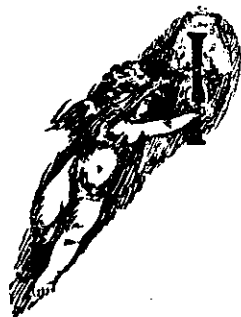
Members of the Senior Class: I have claimed your audience but for a little while. No matter; length is not strength, nor brevity weakness. If I have failed to bend your minds down to the single truth I have tried to make plain and persuasive, I cannot repair my failure now. On Tuesday you are to receive from the hand of your President the diploma which certifies that you have conquered knowledge and gained a competent skill in the courses you have chosen. Henceforth in arts and crafts you are to be known as experts, picked men and women, a privileged class, upon whom has been conferred, as the reward of strenuous labor, the right to claim the world's confidence. And the world will give it you. It always has, it always will. But remembering that, after all, you are to act as specialists and experts only part of the time, that part of the time you must act as citizens, members of society, friends, kinsmen, and kinswomen, will you not, as you receive your diplomas, find in them a commission and a command to seek first the kingdom of God and his righteousness as the sole divine guarantee that you are to bless and not to curse the world that is waiting to receive you? Into the wide, swift currents of mankind's vast, unceasing work you launch your bark to-day. See to it that you also throw yourselves into the eternal moral movement of the world, that your best work may last. Be strong in the Lord and in the power of his might, for from one end of the land to the other is heard the cry: "O God, send us men of reverence, of duty, of honor, of integrity, of compassion!" Go; hush that cry by being the men the world is straining its weary eyes to see. The fool hath said in his heart, "There is no God." But I speak not unto fools, but to the wise.

Fare ye well; for unto God's gracious mercy and protection we commit you, O children of many hopes, self-denials, sacrifices, and prayers. The Lord bless you and keep you. The Lord make his face to shine upon you and be gracious unto you. Depart in peace. Seek first the kingdom of God and his righteousness, and the God of peace will be with you always. Amen.

BENEDICTION.

The blessing of God Almighty, the leadership of Jesus Christ, and the unbroken fellowship of the Holy Ghost be with you all forever.

Class-day Exercises.



It is seldom that Huntington Hall has worn so festive an appearance as it did on Monday, the 6th, in honor of the Class Day of the Class of '98. Indeed, this sometime dreary waste had undergone, thanks to a profusion of palms and evergreens, a transformation which required only the gala attire of the audience to make complete.

The Class-day Officers and Class-day Committee took their places on the platform at two o'clock: First Marshal, George Reed Wadsworth; Second Marshal, Robert Allyn; Third Marshal, George Anthony Hutchinson; President of the Class, Charles-Edward Amory Winslow; Historian, Lester Durand Gardner; Statistician, Edward Samuel Chapin; Poet, Thomas Eddy Tallmadge; Prophet, John Stearns Bleeker; Orator, Ernest Frank Russ; Class-day Committee, Carroll Augustus Bennink, Howard Lawrence Bodwell, Howard Lincoln Coburn, Herbert King Conklin, Frank Eugene Coombs, Howell Fisher, Sumner Moulton Milliken, Frank Bridgham Perry, William Edward Putnam, Jr., Edward Molineux Taylor, Fred Henry Twombly, Walter Gustave Zimmerman.

The exercises were commenced by President Charles-Edward Amory Winslow:—

Ladies and Gentlemen: It is with the deepest pleasure that the Class of '98 welcomes its friends here to-day. If our hospitality is not as graceful as it is sincere, you must make allowance for our inexperience as hosts. Until the last Faculty meeting closed at half-past nine on Thursday night we scarcely dared to call our souls our own. To-day we are in complete control of the Institute. To-morrow we proceed to the conquest of the outer world. Pro-

motion, you see, comes rapidly; our budding honors are not quite comfortable yet.

From our new position of dignity, we hasten first to extend a welcome to the Faculty, hoping that they may find this afternoon's exercise as logical as political economy, and as amusing as English literature always seemed to us.

The relations between Faculty and students is one of the things of which Technology is proud; and '98 is not behind other classes in repaying a kindly care, like that of elder brothers in science, with loyalty and gratitude. This is, especially, the day on which we welcome our parents. We want to take them to all the familiar scenes, and find a special pride in pointing out the laboratory in which we have worked. We want them to meet our chums, and see in them all the virtues we have found. We want them to hear our Historian, and our Prophet, and our Poet recite our corporate praises, because it will help to strengthen them in the absurd superstition they all hold that we are so much finer fellows than we really are.

We are grateful to all of our friends who have been good enough to honor us by coming here. It is you who make Class Day by your presence. Very many of you young ladies should feel quite at home. You have been here often,—in thought,—in the thoughts, of course, I mean of many a son of '98. Your memory has beguiled the long and dreary lecture hour; your image has seemed to beckon just outside the window in the spring time, and has proved more absorbing than the dull reality of the examination blue book on the desk within.

Classmates, to us these last few meetings are very precious. We have stood shoulder to shoulder for four years, in work and in play, in hardship and in pleasure. We know each other's failings, and each other's virtues. We have made friendships which we shall never duplicate; the simple man's friendships, which mean so much and say so little, whose only expression is found in a hand upon the shoulder, and whose terms of endearment are couched in more or less abusive slang. We are proud of each other; we are proud of our class. We are filled with loyalty and devotion to our Alma Mater, to Technology.

In all this you may discern a certain trace of egotism. It is natural, however, on this occasion, I think you must allow.

This is a momentous period for us. We stand at a parting of the ways, at the first epoch in our career. It is, naturally, a time for introspection, a time when we pause, and ask ourselves, "Over what road have

we come, and whither are we tending? What has this school done for us to fit us for our part in what is to follow?"

We have laid the ground work of a profession; we have mastered the elements of a trade. But Technology differs from other technical schools in that it does more for its students than this. Its aim is to accomplish the truer, deeper education that develops every faculty of the being in its just proportion, that trains the mind to right and reasonable thinking, that enforces the moral of the oldest English poet that

"Trouthe is the highest thing that man may keep."

There is still more, however, in the highest culture than the simple pursuit of truth, the mere desire to see things as they are. Matthew Arnold says, "There is a view in which all the love of our neighbor, the impulses toward action, help, and beneficence, the desire for removing human error, clearing human confusion, and diminishing human misery, the noble aspiration to leave the world better and happier than we found it,—motives eminently such as are called social,—come in as part of the grounds of culture, and the main and pre-eminent part."

And this sort of culture is particularly that of the technical man. The student at a classical college is often an individualist; the trend of all his training is selfish, egoistic. The work of the technologist, on the other hand, is without; his aim is service. "The impulses toward action, help, and beneficence, the desire for removing human error, clearing human confusion, and diminishing human misery,"—these are his inspirations as he builds roads and public buildings, as he directs the process of industry, as he brings the new and untamed forces of the universe under the subjection of the human will.

There was never a time when the Republic more needed loyal sons to live after the splendid principles of Technology. "*Mens et Manus*" is our motto,—mind and hand. How can the blind forces of emotion and prejudice be met but by the trained scientific intellect schooled in obedience to law and in the freedom that comes from truth? How can the evils in the body politic, the evils of municipal misgovernment, the evils of industrial constraint, be cured but by the unselfish effort of educated men whose aim is the service of their less happy brothers?

In a nation like ours there is a responsibility in education. The graduate of Technology may not simply seek for success in his chosen profession. If he be worthy of his heritage, if he has imbibed the true

spirit of Technology, if he has loved the examples of her great leaders, of the genial far-seeing scholar, William Barton Rogers, of the true knight and gentleman, Francis Amasa Walker, he has a truer and a deeper aim, "the noble aspiration to leave the world better and happier than he found it."

I have dilated at some length upon our ideal of what a Tech. man should be,—his worth, his modesty, his public spirit. It is common with us here, however, to demonstrate by actual specimens. And, therefore, I am to have the pleasure of introducing, as an example, the man we have fitly honored with the highest office in our gift, the First Marshal of the Class of '98, Mr. George Reed Wadsworth.

Mr. Wadsworth:—

Mr. President, Classmates and Friends: For us classmates this is at once a day of joy and of sorrow. We rejoice that after four years' comradeship as loyal supporters of the undergraduate interests of Technology, we are gathered here to-day on the threshold of graduate life. The memorable past, with its host of pleasant associations, is revealed to us on one side, and on the other we see optimistic visions of the part we are to play as alumni.

We grieve that, look at it as we may, to-day is a semblance of the end. The pendulum which has been leading us here is about to stop and to start again upon a new beat.

To-morrow for the last time we shall be called to order as the undergraduate Class of '98, and then the many strong ties which bind us one to another will necessarily become parted as we step out into the world.

To the friends of '98, let me add my hearty welcome. You are here this afternoon to hear sounded officially what you have heard many times before, the praises of our class; and during the course of events should you be struck with the vanity which would ordinarily be unseemly, I beg you to bear with us, and remember that to-day we live on the clouds, let to-morrow bring what it may.

As every great body has had a history, we can lay no claim to originality from the fact of having a history, but in our historian we have been more fortunate. Four years ago, as a Freshman in '98, our historian became known. A man to whom speech was more necessary than words, and whose password was that impertinent, aggressive, upright, little personal pronoun "I." From this we might expect the history to be almost an autobiography. On the contrary,

however, the influence, of the many important positions since held by our historian has reacted strongly, and to-day we leave a history only the greater for his endeavors. I take pleasure in introducing Mr. Lester Durand Gardner.

Mr. Gardner:—

I am indeed proud to be the historian of the Class of '98. Throughout its career at M. I. T. it has stood for all that is good, all that is true, all that is honorable, all that is manly. In the last four years many events have occurred which have left their deep impresses on Technology. Through these '98 has passed, ever striving to assist its Alma Mater, ever lending its undergraduate support. The history of the Class is well known to us all, but I am sure we will be glad to lay before our friends the glorious record of the deeds and victories of '98.

Our class life has been remarkably free from any disturbing elements, forgetting, of course, the memorable Freshman dinner of the class of Umpty Umpt, which the papers so inaptly called "dry." The spirit of good fellowship and unity has grown and developed, until now you see us the best of good fellows and a perfect unit, at least as regards work.

The entrance of '98 into M. I. T. was celebrated by great pyrotechnics on the part of the Bird and Bursar; otherwise it was uneventful. The Secretary was not quite as cordial in his reception as we afterwards learned he might have been. When we started in to examine ourselves we were pleased to discover what a fine lot of infants we were. Big Baby Ulmer had not yet deserted short pants. We simply begged Freddy Twombly to give up his kilts. Zimmerman was still using the bottle. What an improvement!

Our first meeting together was of the customary belligerent nature. But with the assistance of the anti-English High School clique we managed to keep '97 in her place. How memorable were those first meetings when Smith stood on this platform and tried to show us the good points of his constitution. I can clearly remember how the budding politicians tried to deliver orations. Politics has always been a favorite pastime of our class. I might say, however, that this was before President Winslow exerted his powerful influence as a "Boss" of Course VII.

Our first cane rush was a great success, from their point of view. We were told that '97 had never won anything at M. I. T., so we took pity on them and gave them the rush, thanking our lucky stars to have escaped without the customary barrel episode.

At our first semiannual examinations some of us had to give up the good fight. Drill was ruining the health of some of our more delicate members. One man explained to a professor that he was leaving because the dentist said his eyes were weak. Others thought they had completed their course in the art of polite correspondence with the Secretary.

The great joy of our Freshman year was our drill with Harvard. We have been fortunate in being associated with a man who is now showing the Spaniards at Santiago de Cuba the nature of a bluff, Capt. John Bigelow. Our company won with ease, and trailed the crimson of Fair Harvard through Engineering Alley, or what is the same thing, mud. The Class so appreciated the event that bronze medals were presented to the victorious company.

The Freshman year gave us good opportunity to judge the Class as a whole. In every branch of Technology life, in athletics, on the musical clubs, and on THE TECH, '98 was not only an enthusiastic Freshman class, but it showed a spirit of loyalty to all affairs which has always been the foremost of our desires. But best of all, we have become chums, forming friendships that will last throughout our whole lives.

The first act of our Sophomore year was to provide the Freshman class with a full set of Sophomore officers, making the Bird queen. It was necessary to do this twice, as the ungrateful Freshmen were hard to satisfy. Shortly after this we wheeled the babies to the South End grounds, where they were vanquished by the largest beat in the history of the rush, 22 hands to 7. All honor to the light Football team which put up such a great fight against heavy odds. Deprived as they were of the six men that we had on the 'varsity, they are all the more commendable.

Our Sophomore class dinner was a greater success than our first one, owing to the buoyant spirits shown by the members of the Pretzel Club. The athletic career of '98 during this year was one of continued victories. The baseball game was won by us with the fine score of 15 to 8. In the inter-class athletic contest our athletes were successful, and at the end of the year we were awarded the class championship of Technology. The Sophomore year contained many more events in which the men of '98 showed their possibilities. We had learned to be proud of them.

It was shortly after school closed that the class suffered a sad loss. The President of our Freshman and Sophomore years, William Montague Hall, was accidentally killed on his yacht. It is needless for me to eulogize him here. We all had close personal

relations with him, and learned his worth. At our first meeting together we recognized the value of his advice, and ever afterwards were attracted by his manly, sympathetic, and loyal character. Short as his life was, we cherish its memory as an example of enthusiastic devotion to both student and social duties.

On our return to the Institute in the fall we found that the alumni and faculty had organized the Technology Club. At last a place was found where we could meet our professors on a social basis. The first event of our Junior year was the Republican parade of college students. M. I. T. had eight hundred loyal sons marching under cap and gown of red and gray.

Junior year in college is always the time when the metamorphosis of the student takes place. He has recovered from the novelty of things which appealed to him as a Freshman and Sophomore, and during this year he is changed from the enthusiastic boy to a reflective Senior.

Our Junior year was accentuated in this respect. Toward the end of the first term we were suddenly, and without warning, deprived of the presence of one for whom our respect and admiration was unbounded. In the death of General Francis Amasa Walker, who had been the beloved President of the Institute for sixteen years, the student body lost its firmest friend, its strongest advocate, and wisest counsel. We should no longer look back with sorrow to that sad event of our college course, but rather in serious contemplation of a life full of varied activities, each one of which is bound to act as an incentive to us as young men to emulate, in our small way, the glorious career of General Walker. His profound scholarly attainments should appeal to us as we start out into the world, to do our small part in making it better and more noble. His persistent and enthusiastic devotion to M. I. T. should be to us a standard to look up to as alumni. The memory of our association with President Walker will always be with us, constantly reminding us of our duty as men to our Alma Mater and our country. For thirty days the students publicly attested their grief by the suspension of all social functions, and by wearing the crepe rosette on the lapel. After this period of mourning was over, the students of the Institute were a more serious set of young men; young men who had a purpose in life; young men who were not afraid to advance truth, whatever the cost.

The Junior Week of '98 was most successful. Our "Technique" cost more to produce than any other college annual that has ever been published, so far as we can learn. Our "Prom.," theatricals, concerts,

and teas delighted us because it was there we had our sisters and our friends' sisters.

The tenacious spirit of the Class was shown by its records in athletics for the year. Having won the championship in the year previous, we decided to do even better in our Junior year. As a consequence, we not only again won the class championship, but piled up the remarkable score of 109 points, while the total score of the combined other three classes only amounted to 87,—a clear 20 points advantage for our athletes over all others in Technology.

Our Senior year has been filled with much that has been pleasant, much that has been difficult, and much that has caused worry. If one word could characterize a year, I should say that the word for our Senior year was "work." We all came back to the Institute with one purpose, and to-morrow it is to be realized.

The Institute has been very fortunate the last year in being the recipient of a few handsome bequests. The will of Mr. Henry L. Pierce added \$700,000 to our resources, and as a consequence the much-needed new building is in the course of erection. I am told that the corporation are seriously considering placing, within a few years, a new dumb-bell in the gym.

The first social act of our Senior year was our Senior Dinner. It was a most happy one. I should imagine that even that of the Yacht Club could not be much more so. New Year's night will be long remembered by every man who was at the Technology Club. We had assembled to welcome in the glorious year of '98. Shortly before the clock struck the hour we formed an endless chain, one hundred strong, and cheered the advent of the year toward which we had been looking forward with so much eagerness, not to say anxiety.

During the year the Institute has been most fortunate in securing as President a man who is eminent in the scientific world, and world-renowned in his specialty, chemistry,—James Mason Crafts. In our President we have a man of the true scientific type, modest, unassuming, and, above all, an indefatigable worker.

The Class-day election was carried on without the least friction, and it is a commendable fact that the factional differences of the past year were omitted in our Class, and the result proved most satisfactory; that's why I'm here.

Fellow Classmates: Our Class history is almost over. To-morrow we go out into the world having won the mark of scientific men. We are the first class to graduate from this school during the war in which our country is engaged. As undergraduates we

expressed our willingness to sacrifice our all for our country if the need should come. Let us, as graduates, still hold to that purpose. Some of us may find it our duty to go immediately to the front, as has our fellow-classmate, Ensign Strickland. We must never forget that we can show our loyalty to our country, and doubly our loyalty to our family, by remaining at our work at home; all the while we are becoming better and better equipped to serve.

And now as we close our undergraduate history, and are about to turn a new leaf in the book of our lives, let us be loyal to the ideals of '98. Be true sons of the Class which has honored you with its name. Go out into the world with the intention of returning the debt of honoring '98, and then when we come together in the future we can look back at these four years when we were together, with a pride and a satisfaction which we little appreciate now. Ninety-eight as a Class has been, and must always be, first of all loyal to M. I. T.

Mr. Wadsworth:—

Since that first morning in Rogers corridor, when we struggled with our section cards and our tabular views, we have had many and various experiences with statistics, both active and passive. Our whole course at Technology is now graven on Dr. Tyler's books in a most glorious set of statistical records. But, notwithstanding the eminence of Drs. Tyler and Dewey as statisticians, we have in '98 one who easily outclasses them. A man who, on a two-foot scroll, can issue a set of questions sufficient for a complete biographical, philosophical, and ethical treatise of the human race. I have the honor to present Mr. Edward Samuel Chapin.

Mr. Chapin:—

The statistician of past years has generally contented himself with trying to be amusing. Without meaning to reflect upon this time-honored custom, I found myself dissatisfied with this somewhat limited function. I realized the possibilities latent or just awaking in the Class, and determined to gather statistics which would be of value to the future historians of our greatness.

I first issued a set of carefully selected questions,—only two hundred and eighty-seven in all,—assuring my victims that with proper application they could fill in the answers in three hours. By earnest and exhausting personal effort I obtained replies from a majority of the Class; and by still more arduous

endeavors I obtained the rest of the information I needed. I have visited the archives of townhouses, historical and genealogical societies, statistical associations, and charity bureaus, so that to-day I can proudly point to the results of my work as affording a trustworthy investigation into the future possibilities of the Class of '98.

In these volumes are contained data concerning every member of the Class, of which, however, in the few minutes allotted to me, I can give but a small fraction.

First, the antecedents of the Class. This disk represents the blood of the Class for four generations back. The ten per cent of red is English, red coats; the five per cent of yellow Scotch; the twenty-five per cent of violet French and German,—a resultant of scarlet fiery and purple sluggish; the twenty-five per cent of blue, American; and the thirty-five per cent of green, Irish. The disk being rotated, the resultant color indicates the blood of the Class, which is blue.

The tree to the left represents the more prominent characteristics which have developed in the Class from these various infusions of blood. They are all desirable and significant. Humor: wait for our prophet. He knows some stories. Aggressiveness: '97 in our first Freshman meeting never once entered those doors,—a marvelous and an unheard-of Freshman triumph. Diplomacy: In our Sophomore year we elected one of our members regent of '99, another secretary, and all three men delegated to draw up a constitution were '98 men. It was, I assure you, a most unique constitution. Yet, '99 never once tumbled. And, finally, the American trait of enterprise. Witness our "Technique," the only one that has ever been bound in morocco, or has deserved so to be bound; and our successful initiation of a pacific scheme of Class-Day elections. The man that ran against me for statistician helped to make my charts.

So much for the deductions from heredity. Now for the conclusions from environment,—in particular, life at Technology.

The most noticeable feature of life at the Institute is the superabundance of man's great birthright—"work." I have three diagrams to show the effect of the work the Class has done upon its character. The curve in the center shows the hours per evening per man which have been spent in study for each year, and also for comparison, the curve of the thirty colleges within five hundred miles of Boston.

It will be seen first that exam. periods scarcely affect our curve at all. We started in with one and

one-half hours an evening,—we didn't know Technology; then as we began to realize the awful necessities of life, the curve rose abruptly to five hours a day, from which maximum it has gradually decreased to two hours, at the end of our Senior year. Do not infer from this that the Class has become indolent or incompetent. Far from that, as this curve of marks will show. The first year the average was a P.,—Chemistry brought the average down; the second year an L.—Physics; the third a P., higher than the first; and the fourth, despite applied and organic, a C.

Now, the work done is the product of two factors: first, the time spent in study; and, second, the concentrative ability of the student. The time spent in study by the class has decreased; the work done has increased; therefore, the concentrative ability must have increased, and this third curve shows that from ten units on entrance the concentrative ability of the class has grown to a remarkably significant amount,—five hundred and fifty.

And now for a few facts taken at random from amongst the immense amount of data.

The Class numbered three hundred and twenty on entrance. One hundred and ninety-eight will become confirmed bachelors to-morrow. One hundred and eighty-eight has been the largest score before, but '98 has led in all fields, athletic or otherwise. Five take with us the degree of M.S.

Nineteen have joined our ranks from other colleges. Eighteen per cent of the Class live in Boston, thirty-six per cent within 10 miles of Boston, seventy-one per cent in New England, and six per cent more than 1,000 miles. Boyle lives, he says, 24,960 miles from the "Hub," going backward. He lives in Newburyport.

Our Nestor is Frye, thirty-four years. Coburn is second, thirty-one. Our baby is Brewster, twenty years next Thursday. The average age of the Class, neglecting anomalies, is twenty-two years, three months, four days, five hours, eight and three-sixteenths seconds,—the youngest class for many years; but "old men for counsel, young men for war."

Weights have been given to me in pounds and ounces, troy and avoirdupois, grams, carats, grains, shekels, drachms, dynes, ergs, watts, joules, and calories; heights in miles, rods, yards, feet, inches, centimeters, ells, cubits, kilometers, knots, fathoms, degrees, nails, hours, and centuries.

The tallest men in the Class are Allyn and Bleecker, six feet four inches. There are twenty men six feet or over. The shortest man is Gallison, five feet two

inches. Marshall and Koch are each five feet three inches. The average height of the Class is five feet ten inches, or, to be exact, 1,778.95 millimeters.

Ulmer is our weightiest man, 218 pounds. Torrey tips the beam at 200; Drew at 197. A. L. Davis is the lightest man, 115 pounds. Arnold says that he weighs 27,000,000 6 pounds, 1 0.000,000 07. The weight of the typical man of the class is 152 pounds 2 ounces. Gardner weighs 152 pounds.

Ulmer's expansion is twelve inches. Hayden's was minus fifteen inches on receiving news of his first flunk. His waist measure is seventeen inches.

Hürter says that he has spent while here \$9,600; Dixon only \$1,100. A fair average of the total expense of those living at home is \$1,500; of those away from home, \$2,500.

Edgerly elects as his favorite prose work Macaulay's "Henry Esmond"; Allyn, Peabody's "Thermodynamics"; Collins, Beilstein's "Organische Chemie."

Six of the Class came over in the Mayflower; seven trace their ancestry to William the Conqueror, fifteen to Adam, and five to the anthropoid ape. D. S. Brown comes from a long line of kings on one side, and queens on the other, and was born in Hotel Majestic. Alas, that Americans relentlessly frown upon royal prerogatives and pretensions! Scudder claims the whole human family as relatives, but carefully refrains from giving incriminating evidence; while Leonard lost his identity, and quite forgot relatives and ancestry in trying to memorize for the textile exam. the formulæ of azo and naphthyl amido parabenzol sulphanilic acid and di methyl amido tetra ethyl di amido phenyl amido phenyl phenol naphthagonium hydrochlorate.

Thirty per cent of the Class can do their best studying in the morning; forty per cent from 10 to 12 at night; twenty per cent on Sunday; and ten per cent never can study their best. Two per cent have studied Saturday night. Forty per cent believe in the beneficial results of early rising; thirty-five disbelieve; twenty-five never tried it. The favorite exercise of thirty-five per cent is eating; of forty per cent sleeping; and of twenty-five per cent stamping. One hundred per cent think that the "Gym." could be improved; ten per cent suggest tearing it down. Sixty per cent will send their sons to Technology, ten per cent would get even with their parents. Fifty per cent have stolen signs. Colcord holds the record, infinity. Four per cent have been arrested. The rest won't tell.

Two of the Class are married; three confirmed bachelors; six are engaged; ten have tried to be;

twenty per cent announce a clear field and good prospects, and two confidentially communicate their intentions to pop the question to-night, and I plead with the fair wielders of power to consider "the valley of the shadow of death" through which the suppliants have just 'scaped with their lives, and to be merciful.

Boyle and Russ divide the votes for the handsomest man in the class; Allyn, Wadsworth, and Winslow, the most popular; Steffens and Chapin the biggest grinds. Torrey is the best natured; Coombs thinks he is. The most eccentric man is Smith, who is both a strong acid, and, with the help of Dr. Mulliken's wash-bottle, an automatic fire-extinguisher. Zimmerman is the most religious; Tietig, the heaviest smoker; Winslow, the most versatile; Gardner, the most footless. The greatest winners are Mommers and Barker,—at matching pennies. Hutchinson is the most prominent; Putnam, the best athlete; Pendell, the windiest, equal to two gas houses and six cyclones. Arnold, the most to be admired for perseverance and persistency. The brightest man in the Class is Tallmadge; the smartest, Strickland; the sportiest, all the Pretzel Club; the nerviest, the Statistician, for expecting to have his questions answered; the laziest, no choice. Seidensticker, Taylor, and Gardner are the wittiest; Blackmer, the biggest bluffer; A. W. Tucker, the greatest jollier,—ask Hofman; Lansingh and Coburn the most likely to succeed, and Bancroft the hardest to rattle.

So much for disjointed facts. Now to continue our analysis. There are three requisites most essential to the future greatness of the Class: first a sound intellect, second a vivid imagination, and third an immense fund of physical force, of vital energy.

I have determined, by estimation and calculation, the cerebral tissue, the gray matter, of the Class, and find the average to be forty-eight ounces per head. The average of the Faculty is thirty-six ounces.

The imaginative faculty of the Class, likewise, is extraordinary. Kaufman imagined that the honor system had been restored, and that he had pulled an H in applied. Porter imagined that he could remember the formula for albumen. For reference, Schutzenberger's formula is hung at the left. Nickerson has discovered a new translation of *mens et manus*,—not mind and hand, but men and Co-eds.

The energy of the Class is highly significant. Thus, as electrical energy, in ten minutes it deposited enough copper to make telephonic connections between Sampson and Dewey. In Moissan's electric arc furnace, the energy of ten men was quite sufficient to

make a diamond sixteen times as large as the treasured Kohinoor, valued at four hundred and fifty-eight billions. I did not dare to bring it here to show to you.

And now, Mr. First Marshal, Friends, and Classmates, I rest my case. With the figures that I have presented fairly before him, no sane man can doubt the greatness of the future which awaits '98. Indeed, who can doubt that the glory of our nation and of mankind is all foreshadowed in this "Analytical and Statistical Confirmation of the Future Greatness of the Class of '98"?

Mr. Wadsworth:—

It is generally understood that the prerogative of the poet is eccentricity. We look for long, flowing locks, dreamy eyes, and languid mien, with poetry emanating from every feature, filling the listener with thoughts sublime. On looking over our classmates we found that long hair crowned the heads of football men, and that the languid mien was chronic at exam. time, but we found poetry springing from one whose outward qualifications were totally lacking. I am proud to introduce our class poet, Mr. Thomas Eddy Tallmadge.

Mr. Tallmadge:—

The chisel that halts and is dropped to the ground,
The last soaring note with its echoing sound,
The book slowly shut in the westering sun,
Tell of work that is finished, of labor that's done.

But the sculptor steps back from the mute, graven stone,
And he sighs notwithstanding the triumphs he's won.
And the singer, moist-eyed in the thought of his song,
In his soul hears the memoried notes sweep along.

And the student, whom knowledge has freed, lingers still,
For the heart, not the brain, is the master of will.
Fond tyrant, he kneels at thy feet for to-day;
To-morrow surrender thy softening sway.

To-day press the last of the grapes in the glass,
Pluck the roses that fade on their stems as we pass.
Strike a song from the harp e'er the strings waste away;
Stay the footsteps of pleasure for only a day.

Yes, mates, it is finished; as free we are now
As the ships from the ways with her wine-dripping bow;
As free as the prisoner who starts at the sound
Of the clank of his chains as they fall to the ground.

But our fetters were golden; their glistening bands
Held our hearts, not our bodies, our wills, not our hands.
A garden our prison of fruits, not of flowers,
Where work and not dalliance speeded the hours.

There no tropic luxuriance tangled and dank,
Nor stagnant dark pool with its treacherous bank;
'Twas a well-ordered region with broad, level ways,
Lined with myrtles of knowledge and laurels of praise.

Its groves were majestic; its pastures were broad:
Each echoed with labor, a voice from each clod.
Its waters were rivers, swift-flowing and clear;
It took muscle to stem them and keen eyes to steer.

Its hills were precipitous, but sunny withal,
Though the crags were oft dizzy, inviting a fall.
Each one must be clambered, each peak we must mount;
Each fruit must be tasted, we must drink at each fount.

No loiterer allowed in this busy retreat;
No cool, bosky dells there, no carved rustic seat.
If we longed for a ramble, an hour to pass,
We were faced with a notice to "keep off the grass."

Its vault the blue heavens, serene o'er the strife
Of impulse with thought, and of matter with life.
The orb of success had shone clear in its height,
And had flooded the garden with fullness of light.

Yet not ever, for clouds of bereavement have chilled,
And the shadow of sorrow the garden has stilled.
'Tis his wish rolls them back 'till the sunshine appears,
Though the light sparkles now through the dewdrops of tears.

Now the shock of war's thunders the workers have stirred,
While they watched the low flashes whose echoes they heard,
With eyes that flash back with the hate of the foe,
In the hearts of the men who stand ready to go.

For minds keen in knowledge see reason in right,
And the hands skilled in arts are the hands that can fight.
Not more than their hearts glow their forges that heat;
Not as strong as their purpose the iron that they beat.

It's freedom that's peace, and for freedom they close;
A war for God's peace is a war we must choose.
If we fight for it here, if we fight for it there,
In the storm of the fight for the sunshine prepare.

This the fruit we have garnered, the Hesperid prize,
That in minds and in hands our stern duty now lies.
To the truth and the state we are pointed the way;
It is ours to preserve it, 'tis ours to stray.

Lest we stray, fix the lode star of duties cold height;
Lest we fall, grasp the staff of a reasonable right.
Feed the soul on the manner of Conscience's "well done";
Lift the heart with the nectar of world's praises won.

But our parting has come in the youth of the year,
When the vigor of June is all rife on the air.
When our springtime of youth is a season that's done,
And the summer of life with this day has begun.

To the gate of the garden our footsteps we press,
With a sigh of regret and a laugh of success,
'Neath the whispering branches of memories' trees,
That sway with expectancies freshening breeze.

On future's bright threshold we stand ere we part;
'Tis a grasp of the hand, and a throb of the heart,
And a word that's the saddest and sweetest to tell,
That seal of remembrance, a heartfelt farewell.

Mr. Wadsworth:—

As time goes on the history of our Class will become more extensive. Few there are who would even venture to guess at the possibility years hence of such a history, augmented by the brilliant achievements of sons of Ninety-eight, if after four short years we can boast such a record as you have just heard. Our prophet, however, who once overheard a conversation between an Englishman and an American, and from it got a number of good points, has written the next chapter in our history. I take pleasure in presenting Mr. John Stearns Bleeker.

Mr. Bleeker:—

Yes; I was in Klondike at the time. It was during McKimley's third administration, and after the final overthrow of Bryan by the discoveries by the famous chemists, Drs. C. Spayth Koch and G. Thurston Cottle, of that simple process, now known to all, of turning silver into gold.

I was living on Strickland Avenue, named for the famous Admiral Strickland, who was appointed during the first war with Spain, and afterwards was the hero of the War of 1912.

Governor Winslow and Senator Mayer, both of Yukon State, were staying at the Chapel Hotel, where I had been visiting for several weeks; and on this particular morning, as we smoked our twisters after a delightful breakfast of corned-beef hash and chocolate pie, served in a kingly manner, I asked Gov. Charles-Edward Amory to tell me of his doings since we last met in far-away Boston at the graduation exercises of our Class at Technology. The Class of '98, I believe it was called.

Charles-Edward A. W. was only too ready, as usual, to relate some of his thrilling experiences during his years of chase for the fleeting microbe; and it was amusing to hear this man, so changed in appearance,—for he had grown a moustache,—talking in his old-time manner, and with the enthusiasm of a Sophomore toastmaster. He spoke chiefly about the men we had known together at college, and of their successes.

He told me of the great assistance which had been rendered him by his political friend and heeler, G. Anthony Hutchinson, during his fight for Governor of Yukon.

"Yes," interrupted Senator Mayer, 'Hutch' always was a great assistance to aspiring candidates, and many a time has he helped me to an office. He is so straightforward and open, and the city has been immensely improved since he was elected Chief of

Police on the ticket of the Miners, whose platform is 'Five hours of Chem. and no exams.!' "

"Do you know," said C. Edward A. Winslow, "Earnest Russ and Leon Alland, as well as Curtis and Townes, are all on the stage? Russ and Alland are doing well as orators, but Curtis always takes old men parts, and is simply Curtis all the time. You've seen Bancroft since you've been here, of course?" he asked.

"You don't mean 'Joe' Bancroft?" I said.

"The same," said Charles. "He is teaching Elocution, and taking a course in Applied Mechanics at the night school."

Just then a telegraph boy brought Senator Mayer a message, which he read and answered.

"Bad news?" inquired the Governor.

"No," said the Senator; "only a telegram from President Shedd, of the Yellowstone, Yosemite and Yukon River Railroad. In reply to my invitation to dinner, he writes, 'Cannot come,—wash out on the line'; but it will be all right, I think, and I telegraphed him to buy a new shirt and charge it to me."

I was surprised to hear of Shedd also in this part of the country, but on asking I found that there were many other members of the Class in town, and so, taking a list of names and addresses and a map of the town, furnished by the Y. M. C. A., together with useful information about lunch rooms, free and otherwise, I left the Governor and Senator talking politics and Bacteria.

As I looked from my list and map to the houses I passed I noticed the sign,—

TOM E. TALLMADGE,
POET.

4th floor back. Don't take elevator.

I went up stairs, and into a small attic room covered with drawing boards and bits of verse. There sat Thomas Tallmadge, though I should hardly have known him, he looked so intelligent and poetical. His hair was long and abundant, and he wore a very low, turned-down collar and a flowing bow tie. I introduced myself to him, and he said,—

"Ah! then you knew Perry, Course II.'s darling? Mrs. Philbrick he was then. I have composed some poetry about that pair:—

Perry and Philbrick, side by side;

Perry was very handsome.

They talked of love, and of Heaven above,

And the wind blew through the transom.

Tom always was a poet.

"I live here with Putnam,—Society Putnam," he remarked. "He is a practicing architect, and I am a poetical one. I draw his houses and he draws my checks; but I don't mind, for he gives the firm a good name in society. We live a very quiet life here,—that is, I do," he continued. "We do our own cooking and buy our meats of Torry. He is all right in his way, but the scales don't seem true. The greatest excitement I ever have is watching the drills."

"What drills?" I asked.

"Why the Arnold-Watson military manoeuvres, of course. They put Arnold's name first because he is smaller, and has had four years of drill. They are excellent affairs you may be sure. When Major Arnold comes into view, followed by the proud but erect Captain Watson, it really reminds one of our college days, especially as Corporal Bailey of '99 is water carrier. Let's have a drink?"

I acquiesced, and went to the nearest bar, where we met my old friend Jimmy, who, stepping forward, said, "Wie Geht's Pretzel, what'll you have?"

It was good to taste velvet and see the baseball manager again after years of absence. He told me about many men whose names were once familiar in this hall.

"Charles Henry Pease," he said, "was writing a book on 'How things should be done,' and Kimball Course XIII., was studying for the ministry. Lester Gardner," he said, "is at the head of a firm for making artificial 'Is.'"

At this moment a policeman arrested a terrible-looking man, who Tallmadge said was Emery H. Fogarty, student.

We left the café presently, and "Zimm" showed us the way to a beautiful broad street, and a still more beautiful brownstone front house, with the name plate, "Wadsworth."

"Yes," explained Tom Tallmadge, "he lives here in modest grandeur with old Coburn,—Father Coburn. They both met with immense success throughout their careers, and have now retired from work. We have Class of '98 reunions here every month, and Wadsworth tells us of the greatness of the Class, while Coburn,—Father Coburn,—and Allyn, known as Saint Robert the mighty, applaud, and sing, 'Here's to our old M. I. T., M. I. T.'"

That day was indeed the pleasantest I had spent since the last class meeting in 1923, at Hotel Technology, in Seattle; but I was obliged to leave, as my partner in the Atmospheric Transportation Company, handsome Howell Fisher, was waiting for me.

So that was all I saw of my classmates in that year of 1935 at Yukon ; but from what I saw then, and, indeed, from what I see now, I can rest assured, and ask all of you who are interested in the class as a whole, and in its members as individuals, to likewise feel confident that, so long as the number '98 exists, it may be written as synonymous with success.

Mr. Wadsworth :—

The training we have received at Technology is eminently scientific. For want of time, the more cultured courses of History, Literature, and Art have been largely omitted, and whatever latent ability may exist along these lines, awaits the time and inclination to be developed. Notwithstanding the absence of the purely academic courses, we give the Oration a place of honor on our Class-day programme. In our class orator I take pleasure in presenting one who has always been prominent in Technology, as well as in class affairs,—Mr. Ernest Frank Russ.

Mr. Russ :—

Science has been the conjuring element which has influenced our lives at this great school of learning. The aim, the intuitive principle of four years' study at the Institute, cannot have failed to impress that upon us. To attain but a slight insight into the magic meaning of that word, science, has been our incessant endeavor. Slight, I say, for now, more than ever, we realize the infinite work we have undertaken ; we see the vast resources of science, and the expanse of learning which is to be achieved. But we are not to be daunted. We are to proceed to its successful completion.

I care not what sphere of life you have allotted yourself to labor in ; I care not what reason you have for choosing it. They are of secondary and of trivial matter. The one great factor, the necessary element to give success in your chosen sphere is to instill into your work the proper enthusiasm. This idea of enthusiasm may be old, may have become hackneyed through the handling of constant generations, but it will never wear out. No,—it was enthusiasm which stimulated, actuated our ancestors, and made possible the great republic of the United States. In the present crisis this same inherent force has raised the American people to a grand patriotic outburst. In the strictly scientific world we find enthusiasm the touchstone which distinguishes men of true genius. In the hands of President Rogers it made possible the Institute of Technology. Its force in the world is inconceivable. But enthusiasm is not denied to us as

individuals. It is rather the servant of our beck and call. We should foster and allow it to be one of the guiding powers of our lives. It is the great factor which makes possible success, the end for which all are striving.

But the scientific man holds rather a precarious position as to what constitutes his success. It is for him to use or misuse enthusiasm. For does success consist in the individual allowing his enthusiasm in a special line to overshadow all others? Does it consist in a total exclusion of the individual from a wider view of life? Does it, in fact, intend the scientific man to be a bigoted person, and not a fruitful addition to society? Such are the dangers of following too closely one beaten path of self-interest. But the question arises, how are we to put a restraining principle upon our enthusiasm? How are we to prevent ourselves from becoming oblivious to the appreciation of the great works of others? How are we, in fact, to keep ourselves from becoming the narrow-minded, the egotistical person,—the man who leads a life which is satisfactory neither to himself nor to his fellows? This mistaken view of enthusiasm, this unrestricted zeal to pursue a special line, may find its corrective in a proper educational training. For education it is more than any other factor that molds our lives.

From the very outset there was a cry against scientific study, that it would have a tendency to overspecialization, and that, therefore, its narrowing principles would be dangerous ones to instill into a growing mind. This opposition of classical educators is hard to realize when we consider the present advanced state to which a scientific education has extended. It is hard to believe that the practical value of scientific study could have been so clearly overlooked. It was a difficult and painstaking task to modify these popular ideas. Many years of labor and preparation were necessary on the part of President Rogers, the great advocate of practical scientific training.

However, he accomplished his task. The great and lasting milestone was the founding of the Massachusetts Institute of Technology. It was, indeed, a novel experiment,—this idea of a school which should have as its principal aim the scientific education of man. An early closing of its doors was predicted. Such a complete departure from the established views on education could not but meet with failure. Still, the school struggled on. It was rewarded by increased success in latter years, and now stands a living vindication that the scientific principle may be successfully introduced into modern education.

But there was an element in the Institute's plans and principles which has been one of the important factors in its successful career. This was the introduction into its curriculum of studies which form the groundwork of a liberal education,—studies like literature, economics, and history, which have ever been ennobling and broadening factors in molding the mind of man. The position in education which these studies occupied was realized by the founder of the Institute. Their importance was further emphasized by General Walker. Both clearly foresaw the deep but narrow channels of the mind in which science, if left to its natural course, would flow. The current of scientific thought would wear these channels deeper and deeper; but it would never expand them, nor in any way broaden the mind. What, then, should be the nourishing source, the broadening influence? Certain studies must be introduced to accomplish this purpose, else a scientific training could not be properly called education. For education has a broad meaning, and is not confined to any restricted and narrow line of thought. So it was that non-scientific studies were introduced into this scientific school, and the two great principles of learning were harmonized. A perpetual spring of generalized study was made to supplement the deeper streams of science. To-day the Institute stands as the greatest exponent in the world of this double training,—liberal education conjoined with science. We see, therefore, that the introduction of generalized studies has not deteriorated its scientific standard. We see, in fact, how it has softened the rougher places, and harmonized with science. A mind becomes unresponsive if allowed to flow in one isolated channel. It is a well-known fact of physiology that the incessant use of one portion of the body abnormally develops it, and makes the figure disproportionate. Cannot the same be said of the mind? and will not such an overdevelopment cause it to be sordid, and its owner a useless member of society? Instead, the purpose at the Institute, a purpose made possible by its broad course of study, has ever been to produce the well-rounded man. Science is long and diversified in its scope. Nothing can be attained but an exhaustive study in one of its branches. Hence, the well-rounded man in science must of necessity be the specialist. He would lose his *personnel* if he was to stray from his chosen sphere. He would lose the characteristic quality he possesses as a scientific man. Yes, specialization, above all things, is to be sought. Simply be broad and liberal in your views. Mold your life in the ways of science and humanity. Con-

tinue to employ the broadening tendencies in specialized science enunciated by your Alma Mater. By living thus success will be achieved, and you will become in very truth honored alumni of the Massachusetts Institute of Technology.

Mr. Wadsworth:—

Friends of the Class of '98: For a short hour you have heard in various phases the eulogy of our Class. To us Ninety-eight is not merely a link in the great chain connecting Ninety-seven to Ninety-nine, but rather a united whole, of which we are the several parts, understanding its personalities and its characteristics, and endeavoring each one to do his best to develop a perfect whole, which may be an honor to Technology. If we have made you feel in part our sincerity, we are satisfied.

Classmates, the time has come when we must say farewell. For four years we have worked shoulder to shoulder, performing the tasks set before us; and now the work lies completed beneath our hands. How satisfying is the thought, "I have done my best!" As we have enjoyed each other's successes, so we have sympathized with one another's failures. Gradually and unseemingly our characters have become broader. The influence of sublime personalities has unwittingly set before us the purest aspiration of true manhood, "Charity towards all men," and has inspired the noblest of human affections, the love of man for man.

And when, fellow-classmates, as white-haired old veterans, we are out of the race, may the halls of our Alma Mater ring with the cheers of our posterity attending a Technology the better for our influence.

Graduation Exercises.

ON Tuesday, June 7th, in Huntington Hall, degrees were conferred by the Institute on one hundred and ninety-eight members of the Class of '98, and on five graduate students. As on the preceding day, the hall was filled to its utmost capacity with the friends of the graduating class. On the platform were the Faculty, the Corporation, and Governor Wolcott.

Abstracts of theses illustrating work in the various courses were read as follows: "A Design for a House near a City for a Governor General," H. W. Davis (IV.); "Preparation and Decomposition of the Basic Nitrate of Tellurium," D. W. Edgerly (V.); "The Effect of Moisture in Coal for Retort Coking,"

H. Fisher and J. Lippincott (X.); "The Smelting of a Sulphide Copper Ore," G. M. Godley and R. M. Draper (III.); "Studies for the Disposal of Sewage of Braintree, Mass.," W. D. Hubbard (XI.); "Experiments upon the Tow-rope Resistance of a Model of the U. S. S. Yorktown," A. A. Packard and G. K. Newbury (XIII.); "An Investigation of the Distribution of Power in a Cotton Mill and a Study of the Losses in Transmission," S. S. Philbrick and F. B. Perry (II.); "A Statistical Study of the Export Trade of the United States with the Countries of South America," E. F. Russ (IX.); "On the Dielectric Constant and Electrical Conductivity of Liquid Ammonia," M. de K. Thompson, Jr. (VIII.); "Plan for the Abolition of the Grade Crossing at Eastern Avenue, Keene, N. H.," G. R. Wadsworth and W. R. Strickland (I.); "A Method of Calibrating Wattmeters by Calorimetry," K. W. Waterson and L. S. Streng (VI.); "On the Degree of Bacterial Purification of Water Effected by Freezing, with Special Reference to the Bacillus of Typhoid Fever and the Purity of Public Ice Supplies," C.-E. A. Winslow (VII.).

A short address was made by Mr. Augustus Lowell of the Corporation, and the degrees were then awarded.

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John Arthur Collins, Jr., S.B.; Irénée du Pont, S.B.; Edmund Sewell Manson, Jr., S.B.; Albert Ernest Smyser, S.B.; Theodore Ernest Videto, S.B.

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Course I.: Leon Alland, Roger Ward Babson, Lyman Edward Bacon, William Laramy Butcher, Le Roy Henry Byam, Ira Mason Chace, Jr., Philip Herrick Dater, B.A., Albert Justin Fearing, Albert Irwin Frye, Ralph Tucker Horton, George Danforth Huntington, A.B., Frederic Alexander Jones, Elwell Fairfield Kimball, Robert Lacy, A.B., Edward Percy Lane, Sumner Moulton

Milliken, Joseph Julius Moebs, Leroy Deering Peavey, Robert Winthrop Pratt, Jr., Benson Bulkeley Priest, Harry Francis Sawtelle, Edward Clayton Sherman, Charles Jernegan Skinner, William Graves Smith, Frank Alger Spaulding, William Frederick Steffens, William Randolph Strickland, Horace Richmond Thayer, George Winfield Treat, George Reed Wadsworth, Ralph Edward Wilder, Winthrop Barrett Wood.

Course II.: Robert Allyn, Harrington Barker, Henry Clifford Belcher, John Stearns Bleecker, Howard Lawrence Bodwell, George Henry Booth, William Brewster, Elwell Robert Butterworth, Donald Chenery Campbell, Paul Clifford, Herbert Franklin Cobb, Howard Lincoln Coburn, Harvey Leon Currier, Raymond Hewes Danforth, Irving Bigelow Dodge, David Colton Fenner, Ph.B., Ernest Augustus Gallison, Clarence Goldsmith, George Owens Haskell, Heber Augustus Hopkins, George Anthony Hutchinson, Paul Franklin Johnson, Irving Hayes Kaufman, James Fred Muhlig, Samuel Abrahams Neidich, Ph.B., Charles Henry Pease, Frank Bridgham Perry, Shirley Seavey Philbrick, Charles Russell Richards, Joseph Caius Riley, Jr., Eugene White Rutherford, Henry Francis Scott, Albert Rix Shedd, Charles Henry Smith, Edward Molineux Taylor, Mark Elliott Taylor, Frank Stevenson Tucker, John Edward Warren, Edgar Arthur Weimar, Paul Bancroft Wesson, Clifton White Wilder, Walter Gustave Zimmermann.

Course III.: William Daniels Blackmer, Frank Forest Colcord, Alvan Lamson Davis, Robert May Draper, George McMurtrie Godley, Lewis Andrews Hayden, Charles Swanberg Hürter.

Course IV.: Donald Nelson Alexander, George Burnham, Frank Eugene Coombs, William Edward Cotter, Eva Hayes Crane, William Sumner Barton Dana, Huntley Ward Davis, Robert Seely De Golyer, Finlay Forbes Ferguson, A.B., B.S., Edward Thomas Foulkes, Frederic Furbish, B.S., Frank Boltin

Heathman, Harry Creighton Ingalls, Arthur Samuel Keene, Walter Henry Lee, Edmund Cook Little, James Sherwood McIntyre, George Eugene Mathews, William Edward Putnam, Jr., A.B., Henry Parsons Richmond, Edward Warren Ritchie, Benjamin Franklin Winslow Russell, Ernest Herman Schroeder, Gorham Phillips Stevens, William Wentworth Stevens, Thomas Eddy Tallmadge, Rudolph Tietig, Atherton Howe Tucker, Roscoe Benjamin Whitten.

Course V.: Elliott Rensselaer Barker, William Harvey Barlow, Arthur Alphonzo Blanchard, Martin Boyle, Edward Samuel Chapin, George Thurston Cottle, John Brown Dixon, Daniel Wilbert Edgerly, Arthur Ira Franklin, Frederick Chester Gilbert, John Newton Goddard, Areli Hull Jacoby, William Kelley, Robert Everett Kendall, Carleton Spayth Koch, Richard Mommers, Arthur Felix Porter, Heyward Scudder, B.A., Joseph Homer Sears, Lewis Jerome Seidensticker, Horace Tilden Smith, Mary Jane Thomson, George Frederick Ulmer.

Course VI.: Lyman Arnold, Milan Valentine Ayres, Francis Patrick Bergen, Dickson Queen Brown, A.B., Herbert Luther Cobb, Worthington Cornell, George Warren Craven, Luther Alberto Crowell, Fred Bertram Cutter, George Rupert Davison, Ray Clinton Faught, George Isaac Fiske, Simon Fleisher, James Ezra Hazeltine, Carl Stout High, Arthur Fiske Howard, B.S., Franklin Miner Kellogg, Van Rensselaer Lansingh, B.S., Percival Hall Lombard, A.B., Charles Edward Lord, Durand Mayer, Edward Francis Morrill, Willard Bundy Nelson, Henry Borden Newhall, Jr., Charles William Pendell, Edward Bridge Richardson, Thomas Mayo Roberts, A.B., Homer Earle Sargent, Jr., Ph.B., Albion Walker Shaw, William Deering Staples, Lewis Star Streng, Karl William Waterson, John Frederick Wessel, A.B.

Course VII.: Mabel Flora Forrest, Susanah Usher, Charles-Edward Amory Winslow.

Course VIII.: Frederick Kendall Bishop,

Joseph George Coffin, Paul McJunkin, Maurice De Kay Thompson, Jr.

Course IX.: Everett Nichols Curtis, Lester Durand Gardner, Ernest Frank Russ, Edward Sturtevant, Fred Henry Twombly, David Laforest Wing.

Course X.: Joseph Bancroft, Albert Thompson Drew, Howell Fisher, William Clark Fownes, Arthur Lindsay Goodrich, Edwin Kuttroff, Jesse Treadwell Lippincott, William Adamson Marshall, Clarendon Nickerson.

Course XI.: Chester Francis Drake, Winfred Dean Hubbard, Henry Douglas Osgood.

Course XIII.: Charles Henry Godbold, Jr., Lyman Foster Hewins, Walter Everard Kimball, Walter Gardner McConnell, George Kellogg Newbury, Alpheus Appleton Packard, Walter Page.

Class Meeting.

AT a meeting of the Senior Class on June 7th, reports were made by the secretary and the treasurer of the Class. Mr. Conklin's report showed a class debt of \$84.00, contracted during the past four years. Mr. Allyn, treasurer of the Class-day Committee, reported a balance of \$115.00. It was moved that the class debt be paid from this sum, and that the rest be given to the Class. A vote of thanks was given the Graduation Committee of the Faculty, the Junior Ushers, and the Musical Clubs. A graduate constitution, similar to '97's, was adopted, and C.-E. A. Winslow elected Secretary, and E. F. Russ, Vice Secretary.

N. E. I. P. A. Meeting.

THE seventeenth annual meeting of the New England Intercollegiate Press Association was held at the Copley Square Hotel, Boston, on May 20th. Representatives from nearly all the New England colleges were present. At the afternoon meeting papers were read on the following subjects: "Editorials," Morgan Barney, Technology;

"Advertisements," W. A. Benson, Trinity; "The Best Method of Selecting Editors," J. H. Mariott, Amherst; "The College Monthly as an Influence in College Life," Miss Sinclair, Mt. Holyoke; "Friendship between Man and Man in College Verse," H. R. Remsen, Trinity. Mr. M. C. Ayers, of the *Advertiser*, addressed the Association on "Journalism as a Profession."

At the banquet in the evening C.-E. A. Winslow acted as toastmaster. G. M. Richmond, Technology, responded to the toast, "The Hub."

The Worcester Meet.

The Meet held at Worcester, May 21st, was the most successful, from an athletic standpoint, ever held by the New England Intercollegiate Association. Amherst and Brown tied for first place with 24 points each, Dartmouth was third with 23, and Technology fourth with 21 points. Seven Association records, including one world's record, were broken and one tied. Technology made two of these records: Murray, in the bicycle, 5 min. and 17 $\frac{3}{5}$ sec., and Burch, in the low hurdles, 25 $\frac{4}{5}$ seconds.

We had no one in the 100 yards, but Hall won his heat in the 220, although in the final, owing to a poor start, he was beaten out by Callahan for third place. In the quarter, Dutton and Priest ran in the final, Dutton winning a good third. Garrett was sick, but entered in the half, and would have taken a third had he not mistaken the finish, and stopped. In the mile Sears ran in about 4 minutes 40 seconds, but did not place. Pray did some good work in the two-mile, and, without two record breakers against him, would have gotten better than a third. Captain Wentworth ran a plucky race in the high hurdles, but his poor condition lost him a place. Putnam and Baxter surprised the other colleges in the high jump, and took both first and second places. Copp won third in the discus. One of the prettiest races of the

day was the bicycle. Murray was in third place up to the last lap. Then passing the others, as if they were not moving, he won by 150 yards in record time. Unfortunately Chase was thrown in this race. Payne did the best work for us in the pole vault.

On the return trip to Boston, Burch, '99, was elected captain for the next year's team.

Tech. '01, 13; '00, 3.

To the surprise of everyone, the Sophomores were beaten in the annual baseball game with the Freshmen. The victory is due almost entirely to Captain Wood. Besides allowing only two hits off his delivery, he made four hits out of five times at bat. Shepard ran bases very well for the Freshmen. Chaffee played the best game for 1900. Following is the summary:—

1901. Sucro, r.; Wilder, l.; Adams, s.s.; Wood, p.; White, c. f.; Chubb, 1st; Hounsfeld, 2; Shepard, 3; Woodhall, c.

1900. Woodward, c.; McMasters, s.s.; Osgood, 2; Chaffee, 1st.; Crowell, c. f.; Glover, r.; Dart, l.; Collier, 3; Price, p.

Innings,	1	2	3	4	5	6	7	8	9
1901.	3	1	0	0	0	0	5	0	4—13
1900.	2	0	0	0	0	0	0	0	1—3

Two-base hit, Shepard; three-base hit, Adams; stolen bases, McMasters, Shepard, 3; Wood, 2; first on balls, by Price, 8; by Wood, 2; struckout, by Wood, 6; by Price, 6; double play, McMasters, Osgood and Chaffee; passed balls, Woodward, 2; Woodhall. Time, 2 h. Attendance, 400.

The Varsity Track Team for the season of '98 is composed of the following men: F. K. Baxter, '01; H. H. Bodwell, '98; G. P. Burch, '99; H. A. B. Campbell, '99; E. S. Chapin, '98; F. D. Chase, '00; G. I. Copp, '99; F. B. Dutton, '00; F. C. Field, '98; W. W. Garrett, '01; E. R. Gurney, '99; M. W. Hall, '00; F. L. H. Kimball, '99; H. B. Mayhew, '00; R. Murray, '01; A. W. Payne,

'01; D. M. Pray, '99; R. P. Priest, '00; W. E. Putnam, '98; H. H. Schmidt, '99; J. F. Wentworth, '00, Captain; G. C. Winslow, '99, Manager.

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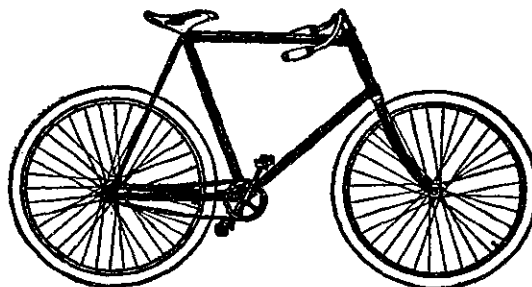
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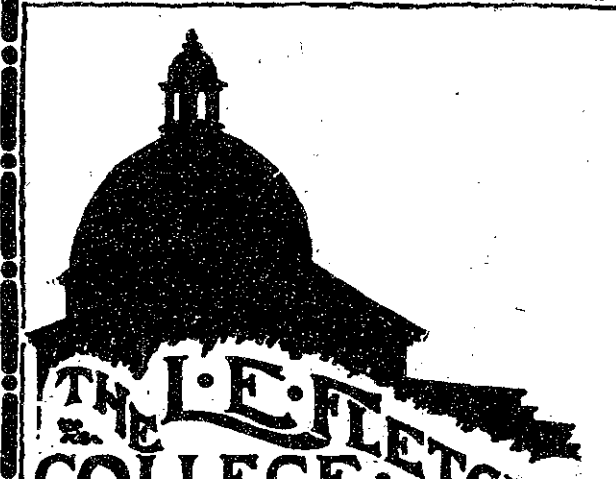
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